

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

17. (currently amended): A feed screw device comprising:
a screw shaft;
a nut member threadably engaging an outer peripheral surface of said screw shaft;
a lubricant supply device, at least a portion of the lubricant supply device contacting said screw shaft; and
a housing member which is secured to said nut member and houses said lubricant supply device, said nut member being positioned outside of said housing member,

wherein said housing member is disposed to project from an axial end surface of the nut member and along an outer circumferential surface of the lubricant supply device, said outer circumferential surface extending in a longitudinal direction of said screw shaft, and

wherein said housing member includes a side that extends radially inward to cover an axial end portion of said lubricant supply device, said axial end portion of said lubricant supply device faces in the longitudinal direction away from said nut member,

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

18. (currently amended): A feed screw device comprising:
a screw shaft;

a nut member threadably engaging an outer peripheral surface of said screw shaft;
a lubricant supply device, at least a portion of the lubricant supply device
contacting said screw shaft; and

a housing member which is secured to said nut member and houses said lubricant
supply device, said nut member being positioned outside of said housing member,

wherein said housing member comprises a cylindrical portion covering an outer
circumferential surface of the lubricant supply device, and said outer circumferential
surface extends beyond an end face of said nut member, and

wherein said housing member includes a side that extends radially inward to
cover an axial end portion of said lubricant supply device, said axial end portion of said
lubricant supply device faces away from said nut member in a longitudinal direction of
said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to
facilitate engagement with said nut member.

19. (currently amended): A feed screw device comprising:

a screw shaft;
a nut member threadably engaging an outer peripheral surface of said screw shaft,
said nut member having an end surface that faces in a longitudinal direction of said screw
shaft;

a lubricant supply device, at least a portion of the lubricant supply device
contacting said screw shaft; and

a housing member which is secured to said nut member and houses said lubricant supply device, said housing member including,

a cylindrical portion that extends in a direction away from said nut member,
an end surface that faces towards said end surface of said nut member, and
a side portion opposite said end surface of said housing member, said side portion covers an axial end of said lubricant supply device, said axial end of said lubricant supply device faces away from said nut member in a longitudinal direction of said screw shaft,
and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

20. (previously presented): The feed screw device of claim 19, wherein said end face covers said axial end away from the nut member.

21. (previously presented): The feed screw device of claim 19, wherein said portion of said lubricant supply device contacts a thread groove of said screw shaft.

22. (currently amended): A feed screw device comprising:

a screw shaft;
a nut member threadably engaging an outer peripheral surface of said screw shaft;
a lubricant supply device, at least a portion of the lubricant supply device contacting said screw shaft; and

a housing member which is secured to said nut member and houses said lubricant supply device,

wherein said housing member has a cylindrical portion that extends away from said nut member so as to surround said lubricant supply device, and

wherein said housing member includes a side that extends radially inward to cover an axial end portion of said lubricant supply device, said axial end portion of said lubricant supply device faces away from said nut member in a longitudinal direction of said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

23. (previously presented): The feed screw device of claim 17, further comprising:

a means for securing said housing to said nut member.

24. (previously presented): The feed screw device of claim 18, further comprising:

a means for securing said housing to said nut member.

25. (previously presented): The feed screw device of claim 19, further comprising:

a means for securing said housing to said nut member.

26. (previously presented): The feed screw device of claim 22, further comprising:

a means for securing said housing to said nut member.

27. (previously presented): The feed screw device of claim 23, wherein said means for securing comprises a screw threaded to contact at least a portion of said nut member and into at least a portion of said housing.

28. (previously presented): The feed screw device of claim 24, wherein said means for securing comprises a screw threaded to contact at least a portion of said nut member and into at least a portion of said housing.

29. (previously presented): The feed screw device of claim 25, wherein said means for securing comprises a screw threaded to contact at least a portion of said nut member and into at least a portion of said housing.

30. (previously presented): The feed screw device of claim 26, wherein said means for securing comprises a screw threaded to contact at least a portion of said nut member and into at least a portion of said housing.

31. (currently amended): A feed screw device comprising:
a screw shaft;
a nut member threadably engaging an outer peripheral surface of said screw shaft;
a lubricant supply device contacting said screw shaft;

a retaining ring that stores said lubricant supply device and is fixed to said nut member, said nut member being positioned outside of said retaining ring; and

a fastener that fixes said retaining ring to said nut member,

wherein said retaining ring projects from an axial end surface of the nut member and along an outer circumferential surface of the lubricant supply device, said outer circumferential surface extending in a longitudinal direction of said screw shaft, and

wherein said retaining ring includes a side that extends radially inward to cover an axial end portion of said lubricant supply device, said axial end portion of said lubricant supply device faces away from said nut member in the longitudinal direction of said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

32. (currently amended): A feed screw device comprising:

a screw shaft;

a nut member threadably engaging an outer peripheral surface of said screw shaft;

a lubricant supply device contacting said screw shaft;

a retaining ring that stores said lubricant supply device and is fixed to said nut member, said nut member being positioned outside of said retaining ring; and

a fastener that fixes said retaining ring to said nut member,

wherein said retaining ring comprises a cylindrical portion covering an outer circumferential surface of the lubricant supply device, and said outer circumferential surface extends beyond an end face of said nut member, and

wherein said retaining ring includes a side that extends radially inward to cover an axial end portion of said lubricant supply device, said axial end portion of said lubricant supply device faces away from said nut member in a longitudinal direction of said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

33. (currently amended): A feed screw device comprising:

a screw shaft;

a nut member threadably engaging an outer peripheral surface of said screw shaft, said nut member having an end surface that faces in a longitudinal direction of said screw shaft;

a lubricant supply device contacting said screw shaft;

a retaining ring that stores said lubricant supply device and is fixed to said nut member, said nut member being positioned outside of said retaining ring, said retaining ring including,

a cylindrical portion that extends in a direction away from said nut member,

an end surface that faces towards said end surface of said nut member, and

a side portion opposite said end surface of said retaining ring, said side portion covers an axial end of said lubricant supply device, said axial end facing away from said nut member in a longitudinal direction of said screw shaft; and

a fastener that fixes said retaining ring to said nut member, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

34. (currently amended): A feed screw device comprising:
a screw shaft;
a nut member threadably engaging an outer peripheral surface of said screw shaft;
a lubricant supply device contacting said screw shaft;
a retaining ring that stores said lubricant supply device and is fixed to said nut member; and

a fastener that fixes said retaining ring to said nut member,
wherein said retaining ring has a cylindrical portion that extends away from said nut member so as to surround said lubricant supply device, and

wherein said retaining ring includes a side that extends radially inward to cover an axial end portion of said lubricant supply device, said axial end portion of said lubricant supply device faces away from said nut member in a longitudinal direction of said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

35. (previously presented): The feed screw device of claim 31, wherein said fastener comprises a screw threaded to contact at least a portion of said nut member, and into at least a portion of said retaining ring.

36. (currently amended): A feed screw device comprising:

a screw shaft;

a nut member threadably engaging an outer peripheral surface of said screw shaft;

a means for supplying a lubricant to said screw shaft; and

a means for storing said means for supplying said lubricant outside of said nut member, said means for storing being in contact with a surface of said nut member,

wherein said means for storing extends from an axial end surface of the nut member in a longitudinal direction of said screw shaft, and

wherein said means for storing includes a side that extends radially inward to cover an axial end portion of said means for supplying a lubricant, said axial end portion of said means for supplying a lubricant faces away from said nut member in the longitudinal direction of said screw shaft, and

wherein said lubricant supply device primarily lubricates said screw shaft to facilitate engagement with said nut member.

37. (previously presented): The feed screw device of claim 17, wherein said lubricant supply device contains a lubricant oil or grease.

38. (previously presented): The feed screw device of claim 18, wherein said lubricant supply device contains a lubricant oil or grease.

39. (previously presented): The feed screw device of claim 19, wherein said lubricant supply device contains a lubricant oil or grease.

40. (previously presented): The feed screw device of claim 22, wherein said lubricant supply device contains a lubricant oil or grease.

41. (previously presented): The feed screw device of claim 31, wherein said lubricant supply device contains a lubricant oil or grease.

42. (previously presented): The feed screw device of claim 32, wherein said lubricant supply device contains a lubricant oil or grease.

43. (previously presented): The feed screw device of claim 33, wherein said lubricant supply device contains a lubricant oil or grease.

44. (previously presented): The feed screw device of claim 34, wherein said lubricant supply device contains a lubricant oil or grease.

45. (previously presented): The feed screw device of claim 36, wherein said means for supplying a lubricant contains a lubricant oil or grease.

46. (previously presented): The feed screw device of claim 19, wherein said housing member surrounds an outer circumferential surface of the lubricant supply device.

47. (previously presented): The feed screw device of claim 33, wherein said retaining ring surrounds an outer circumferential surface of the lubricant supply device.